

CLAIMS

What is claimed is:

1. An apparatus to prevent tampering into an electrical device container in which a power circuit is at least partially enclosed, the apparatus comprising:

a housing having an end that is adapted to be coupled to said container;

an electrical switch secured within said housing and adapted to be coupled to said power circuit; and

a skirt substantially covering said housing and said electrical switch, and having a pliable shoulder portion that defines an opening through which said housing end extends.

2. The apparatus according to claim 1, wherein said pliable shoulder portion is formed from a rubber material.

3. The apparatus according to claim 2, wherein said skirt is formed entirely from a rubber material.

4. The apparatus according to claim 1, wherein said electrical switch includes terminals extending outside of said housing in a direction toward said power circuit, and said skirt extends as far as said terminals in the same direction.

5. The apparatus according to claim 1, wherein said skirt shoulder portion closely surrounds said housing to create a substantially fluid impermeable seal around said housing.

6. The apparatus according to claim 1, wherein said power circuit is formed on a circuit board that is enclosed within said container, and said skirt is adapted to abut with said circuit board and form a substantially fluid impermeable seal with said circuit board.

7. The apparatus according to claim 6, wherein said skirt has an outwardly extending flaring portion that is adapted to form said substantially fluid impermeable seal with said circuit board.

8. The apparatus according to claim 6, wherein said skirt opening is substantially circular and has a first diameter, and said skirt has an outwardly extending flaring portion that is adapted to form a substantially fluid impermeable seal with said circuit board and has a second diameter that is larger than said first diameter.

9. The apparatus according to claim 1, wherein said skirt comprises polyurethane rubber.

10. A tamper resistant electrical device, comprising:
- a container;
 - a substrate disposed inside said container;
 - a power circuit formed on said substrate; and
 - an apparatus to prevent tampering into said container, comprising:
 - a housing having an end that is coupled to said container,
 - an electrical switch secured within said housing and coupled to said power circuit, and
 - a skirt substantially covering said housing and said electrical switch, and having a pliable shoulder portion that defines an opening through which said housing end extends.
11. The device according to claim 10, wherein said pliable shoulder portion is formed from a rubber material.
12. The device according to claim 11, wherein said skirt is formed entirely from a rubber material.
13. The device according to claim 10, wherein said electrical switch includes terminals extending outside of said housing and coupling said power circuit to said electrical switch, and said skirt abuts said substrate.
14. The device according to claim 10, wherein said skirt shoulder portion closely surrounds said housing to create a substantially fluid impermeable seal around said housing.

15. The device according to claim 14, wherein said substrate is a circuit board, and said skirt forms a substantially fluid impermeable seal with said circuit board.

16. The device according to claim 15, wherein said skirt has an outwardly extending flaring portion that forms said substantially fluid impermeable seal with said circuit board.

17. The device according to claim 16, wherein said skirt opening is substantially circular and has a first diameter, and said skirt has an outwardly extending flaring portion that forms said substantially fluid impermeable seal with said circuit board and has a second diameter that is larger than said first diameter.

18. The device according to claim 10, wherein said skirt comprises polyurethane rubber.

19. The device according to claim 10, wherein said housing end comprises a groove that directly engages with said container.

20. The device according to claim 19, wherein said housing end further comprises a lip that is continuous with said groove and that directly engages with said container in a manner whereby opening said container causes said housing to be pulled through said skirt opening by said lip.

21. The device according to claim 19, wherein said housing end further comprises a square edged body that is disposed within said groove for secure engagement with said container.

22. The device according to claim 10, wherein said substrate comprises power circuit contacts that are coupled to said electrical switch.

23. The device according to claim 22, wherein said substrate further comprises a ground material formed on said substrate and defining a mounting area that includes said power circuit contacts.

24. The device according to claim 23, wherein said skirt forms a substantially fluid impermeable seal around said ground material.

25. The device according to claim 24, wherein said skirt has an outwardly extending flaring portion that forms said substantially fluid impermeable seal around said ground material.

26. The device according to claim 25, wherein said skirt opening is substantially circular and has a first diameter, and said skirt has an outwardly extending flaring portion that forms said substantially fluid impermeable seal around said ground material and has a second diameter that is larger than said first diameter.